

Lecture on Thermal Comfort: Paradigm Shift in Energy Restrained World

Date: 14th December, 2022 (Wednesday)

Time: 2:30 PM to 4:00 PM


Duration: 1:30 hour

No. of Student Participants: 57


No. of Faculty Participants: 31

No. of External Guests: 1



 **Department of
Architecture and
Regional Planning**

 **75
Azadi Ka
Amrit Mahotsav**


 **INSTITUTION'S
INNOVATION
COUNCIL**
(Ministry of HRD Initiative)

CELEBRATION OF NATIONAL ENERGY CONSERVATION DAY

THERMAL COMFORT

PARADIGM SHIFT IN ENERGY RESTRAINED WORLD

Wednesday, Dec 14 2022 | 14:30 PM IST



Kindly register at-
<https://forms.gle/cqmbXy1Fv5gJdG7V6>
Meet link will be shared on mail.

PROF RITU GULATI
Associate Professor, Faculty of Architecture,
Abdul Kalam Technical University

Faculty Coordinators:
Ar. Radhika Goel
Ar. Priyank Jain

Conveners:
Department of Architecture and Regional Planning
Institute's Innovation Cell, Gautam Buddha University,
Greater Noida, U.P.

Organiser
Ar. Madhuri Agarwal
(HOD - SOE - B)

Key Note Speaker: Prof. Ritu Gulati, Associate Professor, Faculty of Architecture, A.P.J. Abdul Kalam Technical University

Chief Coordinator: Ar. Madhuri Agarwal, Assistant Professor and HOD, Department of Architecture and Planning, Convener (GBU)

Coordinator: Ar. Radhika Goel and Ar. Priyank Jain

Joining Link: <https://bit.ly/3HwnWHz>

About the speaker:

Ritu Gulati is Associate Professor at Faculty of Architecture, A.P.J. Abdul Kalam Technical University. She has **20+ years** of rich experience in fields like teaching, research and industry experience. She is author of various International and National papers in eminent conferences and journals like **PLEA** (Passive Low Energy Architecture), **IIA** Journals, Journal of Landscape Architecture, edited monograph of Banaras Ghats. She received handful of awards by A+D, Birla YuvaRatna **SAARC** Nations, A3 Foundation. Her areas of specialization are energy efficiency, sustainable architecture, vernacular architecture and housing especially in India. She is currently working on architecture of Lucknow, India especially the house forms, tangible and intangible heritage.

About the chief coordinator:

Ar. Madhuri Agarwal, Assistant Professor and HOD, Department of Architecture and Planning at Gautam Buddha Univeristy, Greater Noida. She is GOLD MEDALIST Post Graduate in Architecture Pedagogy from Faculty of Architecture and Ekistics, Jamia Millia Islamia in year 2012, Currently Pursuing PhD in Architecture. She has approximately **13 years of experience** in various fields like teaching, research, and Industry experience. She has attended several International and National seminars and conferences and workshops. She has completed various National and International Certification with University of Nizwa, Oman and Aachen University, Germany. She is a Member of Council of Architecture and ESDA.

Her areas of interests are Architecture, Architecture Pedagogy, Crafts in Architecture, Heritage. She has various Research Publications in National and International Conferences and Seminars, Journals. She is also a SOCIAL ACTIVIST, leading a campaign '**Neki ki Deewar**' or 'Wall of Kindness' selected for publication in National Report on "Documentation & Compilation of the best practices of Sustainable Development as propounded by Pt. Deen Dayal Upadhaya", a Ministry of Culture, Government of India, Antyodhya along with team (Students of Architecture), has built **100+ walls so far, in 20+ cities**. She has also received Young Researcher Award by ESDA Delhi. She has also received A3 Teachers Award by A3 foundation Chandigarh. She has also received Best Guru Female Award by SEMS Welfare Foundation.

Objective of the session: To get a better understanding of thermal comfort, its relation with climate and energy consumption.

Brief Description of the session:

A Live Session was conducted on “Thermal Comfort: Paradigm Shift in Energy Restrained World” on 14th December, 2022 on Microsoft teams. The session was started by Ar. Madhuri Agarwal, Convener, GBU. She welcomed the key note speaker of the day i.e., Prof. Ritu Gulati, Associate Professor, Faculty of Architecture, A.P.J. Abdul Kalam Technical University and all the participants who joined the program. She also welcomed other eminent guest Dr. Indu Kirti, Dean planning and research who greeted all the participants for National Energy Conservation Day and emphasized on importance of energy conservation. Ar. Madhuri Agarwal also welcomed Dr. kirti pal, Dean, School of engineering who highlighted the importance of such lectures.

Prof. Ritu Gulati started the lecture by explaining the increasing need of human thermal comfort while there is an energy crisis in the world. He also explained that human beings are in search of happiness and how the quest for happiness never ends. She said that similarly the architects and engineers are in search of the human comfort which further has three parts as psychological, physiological and perceptual comfort. Thereafter she defined thermal comfort and explained how thermal comfort affects the human efficiency. The she covered the environmental factors which affects the human thermal comfort like air temperature, mean radiant temperature, humidity, air speed etc. She also explained some personal or subjective factors like clothing, activity, gender, food etc. which affects thermal comfort.

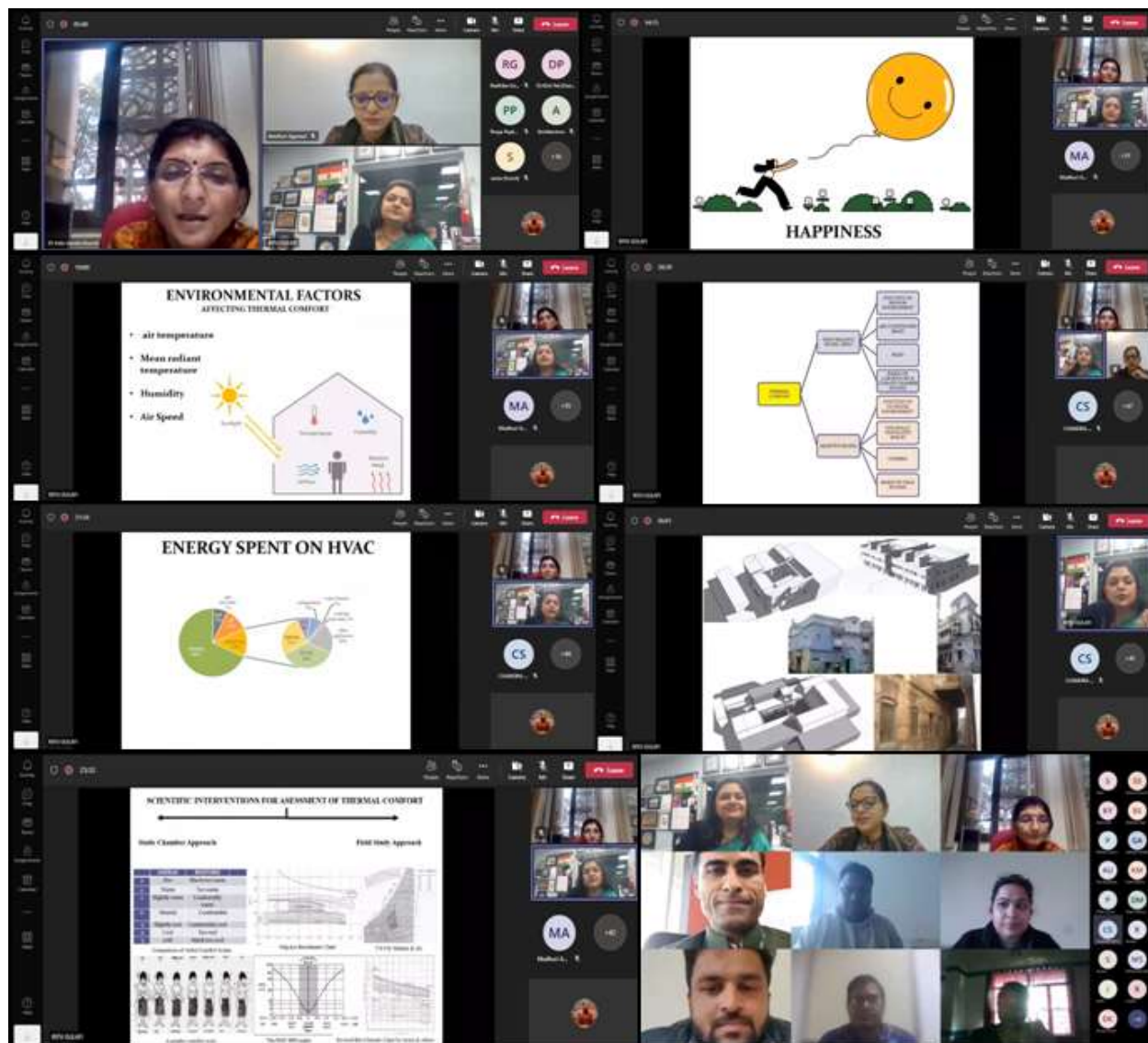
She explained how a body is in thermal balance and related terms such as convection, conduction, radiation, evaporation, gain and loss. Then she highlighted some of the scientific interventions for assessment of thermal comfort such as bioclimatic chart, verbal comfort scales, psychrometric chart etc. Thereafter she explained adaptive comfort which allows humans to prefer a wider range of thermal comfort than usually acceptable by giving example of Tehran, Iran with Nicol graph. She also showed the pie chart related to the energy spent of HVAC out of total electricity consumption and saying that 8% of household income in India gets spent on cooling costs. Then she explained the different climatic zones of India like hot & dry, warm & humid, cold & wet etc. She also shared some data of a survey of 100 people which is based their comfort and related factors and also the use of questionnaire to extract the correct data they needed.

She concluded the lecture by highlighting Mattheiu Ricard who is a monk in France as the happiest person in the world and a famous quote “Happiness comes from within yourself, not from someone else, stop searching, start living”. The session was followed by a short interactive question and answer round. The session was concluded by a Vote of Thanks by Ar. Madhuri Agarwal. The faculty coordinator Ar. Radhika Goel and Ar. Priyank Jain played a key role in the successful completion of the event.

Learning Outcomes:

The Students, Faculties, Research Scholars etc. gained in depth knowledge of the human thermal comfort and the factors deriving it.

Session Photographs:



Social Media Links:

Twitter- <https://twitter.com/madhu2486/status/1603072614012157952?cxt=HHwWgIDQQtZGDob8sAAAA>

LinkedIn- <https://www.linkedin.com/in/madhuri-agarwal-75662b47>

Facebook-

https://m.facebook.com/story.php?story_fbid=pfbid02hK3bBJhciPsDh4GRh4Tn3DcFe5eugBH9o7h1FG149WZhEm1f5zNi6oWUfe3YpBNHI&id=100083105360387&mibextid=Nif5oz